RHIC Physics Run 2002 – 2003, Daily Quench Events for the month of December 2002

December 01 thru December 12, 2002: Commissioning of Blue and Yellow Power Supplies as we begin the dAu Run 2002-2003.

Detailed Power Supply Problems and Solutions are located in the: 2002-03 RHIC RUN Power Supply Summary Reports

Thurs, Dec. 12, 2002:

Quench Event: Blue, 1b-ps1 @ 10:23:44 (+3530408) Permit Fail Time: 10:23:44 (3530437)
QPACtrl: Nothing to report
QDAlarms: 1b-qd1 (B1DSA3_A2VT Int 100) BDUYAU1 Tq= -24
DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 10:54:26 The blue quench link was apparently pulled due to a bug in the tape quench recovery sequence for the yellow ring. Yellow recovery program was communicating with the WFGMAN not the WFGMAN 2. This caused the blue wfgman to ramp the power supplies to zero at SF3, causing the blue link to trip.

Thurs, Dec. 12, 2002:

Quench Event: Blue, 10a-ps3.A @ 13:11:44 (+136988) Permit Fail Time: 13:11:44 (+1369717)
QPACtrl: Nothing to report.
QDAlarms: Running DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Postmortems show power supplies near zero current.

Thurs, Dec. 12, 2002:

Quench Event: Blue, 4b-time.A @ 14:24:48 (+554033) Permit Fail Time: 14:24:48 (+554037
QPACtrl: b4-dhx-qp Crowbar
QDAlarms: 4b-qd1 (B4QFQ1_VT Int 1) Tq= -24
DxHeaters: 6b-ps2.A1, 6b-ps2.A2, 6b-ps2.B1 & 6b-ps2.B2 all FIRED.
Real Quench Status: B6DRDX & B5DRDX Real Quench

Technical Notes from the Running Logs: At 1006B, the dh0 power supply's DCCT went into the failure mode and caused the Quench Detector to trip the DX Magnets B5DX and B6DX and fired all four heaters at 1006B 14:46:52: comment by Mei... Cryo called and told us almost all of the DX magnets quenched.

Fri, Dec. 13, 2002:

Quench Event: Yellow, 12a-ps1.A @ 10:22:28 (+2415868) Permit Fail Time:
Timing Resolver Status: shows y12-q89 as the first to trip. QPACtrl: None to report.
QDAlarms: Y12QDQ9_VT, Int 1, Tq=-12 DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Postmortems indicate that y12-q89 current was running near the maximum current. MCR was running a setpoint of –349 amps. This is a 300amp Dynapower power supply.

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Fri, Dec. 13, 2002:

Quench Event: Blue, 9b-ps1 @ 15:13:20 (+286772) Permit Fail Time: 15:13:20 (+286772)
QPACtrl: Nothing to report.
QDAlarms: Running. DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: The bi9-sxd was accidentally tripped to off instead of the yi9-sxd for testing. Could not be reset and a reboot of the 9b-qd1quench detector system had to be done to restore.

Fri, Dec. 13, 2002:

Quench Event: Yellow, 10a-ps3.A @ 19:10:40 (+2801539)
QPACtrl: Nothing to report.
QDAlarms: 10a-qd2 (Y9DRDO_DO, Int 1)
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Postmortems, nothing unusual.

Sun, Dec. 15, 2002:

Quench Event: Blue, 8b-ps1 @ 12:13:44 (+924593)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: 8b-ps2.A1, 8b-ps2.A2, 8b-ps2.B1 & 8b-ps2.B2 all FIRED.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 11:30:00: Don found out from George that there is a bug in the quench protection software that means a reset to cfe-8b-qd1 is in order to get bi8-tq4 back on.

Mon, Dec. 16, 2002:

Quench Event: Blue, 5b-ps1 @ 10:56:28 (+1735587) Ring Permit Fail Time: 10:56:28 (+2183413)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: 2b-ps2.A1, 2b-ps2.A2, 2b-ps2.B1 & 2b-ps2.B2 all FIRED.
Real Quench Status: Nothing to report.

Mon, Dec. 16, 2002:

Quench Event: Yellow, 5b-ps1 @ 10:56:28 (+1735587) Ring Permit Fail Time: 10:56:28 (+2183413)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: 2b-ps2.A1, 2b-ps2.A2, 2b-ps2.B1 & 2b-ps2.B2 all FIRED.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Quench detection software has been updated. As a result, three QD FEC's have been rebooted with the magnets at zero by T. Clifford

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Mon, Dec. 16, 2002:

Quench Event: Blue, 3b-ps1 @ 13:31:48 (+285678) Ring Permit Fail Time: 08:05:36 (+2183413)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: Indicating that all throughout the ring fired. (Except for 2b-ps2)
Real Quench Status: 8b-qd1 (System Error).

Mon, Dec. 16, 2002:

Quench Event: Yellow, 3b-ps1 @ 13:31:48 (+285678) Ring Permit Fail Time: 08:05:36 (+2183413)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: Indicating that all throughout the ring fired. (Except for 2b-ps2)
Real Quench Status: 8b-qd1 (System Error).

Technical Notes from the Running Logs: New software was loaded for some of the RHIC QD FEC's. The FEC's will be reset by Tom again. 13:55:00: G. Ganetis reports that there may be additional QD software problems. The MCR will wait to bring the Yellow Quench link up again (Blue is up already).

Tues, Dec. 17, 2002:

Quench Event: Blue, 2b-ps1 @ 09:45:48 (+3379176) Ring Permit Fail Time: 09:45:48 (+3379176)
QPACtrl: Nothing to report.
QDAlarms: No FEC/DSP HS
DxHeaters: Indicating that all throughout the ring fired.
Real Quench Status: No FEC/DSP HS

Technical Notes from the Running Logs: 07:30:17 About half an hour ago all computer consoles froze. We completely lost control over the machines. Cryo called and ask us to ramp down the magnets as a precautionary measure (which we can't do under the circumstances). All alarm screens disappeard. Jim inhibited the beam until we gain control again. Wolfram MCR-09:45 The Blue Ring Quench link dropped about the same time as cfe-4b-rtdl was reset. The Yellow Quench link did not drop.

Tues, Dec. 17, 2002:

Quench Event: Yellow, 7b-ps1 @ 12:01:00 (+3789544) Permit Fail Time: 10b-ps3.B 11:59:44 (+2521528)
QPACtrl: Nothing to report.
QDAlarms: Multiple QF= negative (–) Tq's (Quad Focus Buss)
DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: A Yellow Quench Link interlock occurred while running a hysteresis ramp (near top energy). Yellow Main Quad Power Supply Regulation problem, reset. (Reset the Yellow Main Quads).

Tues, Dec. 17, 2002:

Quench Event: Yellow, 7b-ps1 @ 13:11:28 (+3789544)
QPACtrl: Nothing to report.
QDAlarms: Multiple QF= negative (–) Tq's (Quad Focus Buss)
DxHeaters: Did not fire.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 13:16:05: comment by Fulvia... ouch - again - same pattern - yellow quench at approximately the same current. Called George, he is looking into; Problem with the regulation of the main quad bus - main ps not following the setpoint. George and Don need some time to diagnose that.

Tues, Dec. 17, 2002:

Quench Event: Yellow, 6b-ps1 @ 20:39:32 (+1892116) Ring Permit Fail Time: 20:39:32 (+1892116)
QPACtrl: Nothing to report.
QDAlarms: see real quench status.
DxHeaters: Did not fire.
Real Quench Status: Y5QDQ8_VT Int. 1, Tq= -23, Real Quench. Beam was injected into yellow at maximum current levels.

Technical Notes from the Running Logs: 22:01:03: comment by jak... We had a yellow QLI after sitting at flattop for a few minutes. The y6-q89 and the yo5-qf8 supplies show that the current is moving away from the current reference about the same time. The yi6-qf9 supply shows the same thing slightly later. I called cryo and told them what supplies were involved in the QLI. When contacting cryo later, they said that the temperature went up by 0.07 K in this area. However, he did note that since we informed them of the area where the QLI originated, they were able to increase the flow to the magnet string before they received any temperature reports. Hence, being able to get the information to cryo as quickly as possible can reduce the wait time after a quench event. Wed Dec 18 00:05:30: comment by ganetis... This was a real magnet quench on Y5Q8. PostMortem on BLM shows high loss on g5- lm8 - 1200 rads.hr. Postmortems show y6-q89-ps operating at 52.7amps, drops –0.26sec prior to T=zero and yo5-qf8-ps operating at 71amps spike upwards to 94amps –0.23sec prior to T=zero (Iref remained constant).

Wed, Dec. 18, 2002:

Quench Event: Blue, 2b-ps1 @ 00:19:48 (+32114339) Ring Permit Fail Time: 00:19:48 (+32114339)
QPACtrl: Nothing to report.
DxHeaters: All 2b, 4b, 6b, 8b, 10a & 12a Fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Comment by ganetis... The Blue Quench Link tripped because all the blue quench detectors in the service bldgs. went out on a heartbeat failure. This happened because the cfe-4b- rtdl was reset. This is not a good thing to happen. All the Dx quench heaters fired. If the ring was at top energy you would have a 3 to 4 hour wait for cryo to recover. It is VERY important that controls finds why this fec is dieing and fix it! Postmortems indicate that Power Supplies were at zero currents.

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Wed, Dec. 18, 2002:

Quench Event: Blue12a-ps1.A @ 01:23:16 (+1146659) Permit Fail Time: 01:23:16 (+1146659)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Blue ring did not ramp with yellow during the hysteresis ramp. While yellow was coming back down, the blue quench link dropped, pulled by 12a-ps1. (Postmortems show bi12-qf9-ps Iref spiked at –0.10sec before T=zero.)

Wed, Dec. 18, 2002:

Quench Event: Blue, 8b-ps1 @ 01:42:56 (+3153498) Permit Fail Time: 01:42:56 (+3153498)
Timing Resolver Status: QP07-R8BBQF3-bi8-qf3-qp first to trip. QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Blue quench link during recovery. 8b-ps1 pulled the link first. Running scripts again Postmortems indicate bi8-qf3-ps current spiked from 0 to 9 amps prior to T=zero. Power supplies were operating at PARK current.

Wed, Dec. 18, 2002:

Quench Event: Blue, 10a-ps3.A @ 02:09:36 (+2092876) Permit Fail Time: 02:09:36 (+2092876)
Timing Resolver Status: QP10-R10AD8-bo10-dh0-qp first to trip.
QPACtrl: b10-dh0-qp & bi9-dhx-qp Crowbar.
QDAlarms: B10DRD0-D0 Int.1 Tq= -12, Y8DRD0_D0 Int.5, Tq= -11,
DxHeaters: 10a-ps3.A1 & B1, all 8b and 12a Fired
Real Quench Status: Real quench 5min Delay indicates:
(8b-qd1) B8DRDX_VT 1, B7DRDX_VT 1
(10a-qd1) B10DRDX_VT 1
(12a-qd1) B12DRDX_VT 1, B11DRDX_VT 1

Wed, Dec. 18, 2002:

Quench Event: Yellow, 12a-ps1.A @ 02:09:36 (+2677794) Permit Fail Time: 02:09:36 (+2092876)
QDAlarms: B10DRD0-D0 Int.1 Tq= -12, Y8DRD0_D0 Int.5, Tq= -11,
Y12DRD0_D0 Int.5, Tq= -23 and Y12DRD0_D0 Int.5 Tq= -23
DxHeaters: 10a-ps3.A1 & B1, all 8b and 12a Fired

Technical Notes from the Running Logs: 02:15:00: Quench link interlock in both rings at top energy during the hysteresis ramp. dx heaters fired in 8, 10 and 12 o'clock. CCR is responding. G. Ganetis is looking from home. Postmortems show b10-dh0-ps Iref spiked from 1amp up to 215amps causing the quench detectors to trip. Also, yi11-qf1-ps at 79amps –0.56sec before T=zero, bump upwards approximately 2amps then settling back down.

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Thur, Dec. 19, 2002:

Quench Event: Yellow 6b-ps1 @ 23:46:08 (+2948930) Ring Permit Fail Time: 23:46:08 (+2948960)
Timing Resolver Status: QPACtrl: Nothing to report.
QDAlarms: Y6DRD0_d0 Int. 1, Tq= -23
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 23:58:43: comment by jak... The yellow QLI was caused by a large voltage spike for the y6-dh0 supply. (the supply appears to rail at 10,000 mV.) Postmortems verify that y6-dh0 power supply voltage spiked to the rail of 10volts but recovered before T=zero. Power supply was able to recover.

Fri, Dec. 20, 2002: *(POWER DIP)*

Quench Event: Yellow 12a-ps1 @ 13:53:04 (+3570761)
QPACtrl: QP10-R8BD3-b8-dh0-qp OVC, b2, b4, b6, b8, bi9, b12-dhx qp's all CROWBAR.
QDAlarms: Nothing to report.
DxHeaters: 4b, 8b, 12a all Fired.
Real Quench Status: REAL 4b-qd1 indicated B4DRDX_VT 1, B3DRDX_VT 1
8b-qd1 indicated B8DRDX_VT 1, B7DRDX_VT 1
12a-qd1 indicated B12DRDX_VT 1, B11DRDX_VT 1

Fri, Dec. 20, 2002: *(POWER DIP)*

Quench Event: Blue 10a-ps3.A @ 13:53:04 (+3575654)
QPACtrl: QP10-R8BD3-b8-dh0-qp OVC, b2, b4, b6, b8, bi9, b12-dhx qp's all CROWBAR.
QDAlarms: Nothing to report.
DxHeaters: 4b, 8b, 12a all Fired.
Real Quench Status: REAL 4b-qd1 indicated B4DRDX_VT 1, B3DRDX_VT 1
8b-qd1 indicated B8DRDX_VT 1, B7DRDX_VT 1
12a-qd1 indicated B12DRDX_VT 1, B11DRDX_VT 1

Technical Notes from the Running Logs: 14:46:15: comment by Mei... This power dip turns out to be a pretty nasty one. It took down almost everything and also fired the dx heaters. Main power supplies were running at top energy at the time of the power dip.

Fri, Dec. 20, 2002: *(POWER DIP Recovery)*

Quench Event: Blue 2b-ps1 @ 15:24:04 (+878446)
Quench Event: Blue 12a-ps1.A @ 16:57:16 (+3650566)
Quench Event: Yellow 2b-ps1 @ 16:57:52 (+814139)

Technical Notes from the Running Logs: 17:00:00: CCR reports they are cryo stable and ready for ramping. G. Ganetis is looking at the power supplies and restoring the link. 17:40:00: George has finished with the machine. It is at park with the links up. Running hysteresis ramp

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Sat, Dec. 21, 2002:

Quench Event: Yellow 4b-time.A @ 17:15:20 (+138970) Ring Permit Fail Time: 17:15:20 (+1389002)
Timing Resolver Status: y3-tq5-qp first to trip, no faults.
QPACtrl: Nothing to report.
QDAlarms: Data was not stored.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 17:10:50 We started decoupling in Yellow, but after first step the yi3-tq5-ps was tripped. Ramping down. For the next ramp we will try tune changes which prevent us from crossing 0.25 resonance (at the end of the ramp) even if we need to cross 0.2 for that with other tune. Thus we hope to bring more intensity to the flattop for the decoupling work. 17:42:27: comment by vp... The QLI happened while trying to recover yi3-tq5. Postmortems indicated that the mains were at injection current.

Sun, Dec. 22, 2002:

Quench Event: Yellow 6b-ps1 @ 05:23:48 (+1041408) Ring Permit Fail Time: 05:23:48 (+1041438)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 09:22:14: comment by ganetis... After looking at the new timing resolver data for 6b it appears that the permit module pulled the link. This could be a hardware or cable problem from the permit module. Will look at it next maintenance day. 20:33:32: comment by ganetis... I found out later the temperature in the electronics area was very high. The Air conditioning is broken again! This is at least the third time in the last couple of months that AC has failed. These high temperatures greatly decreases the reliability of the equipment and connection. Postmortems indicated that the supplies were ramping down from top energy.

Sun, Dec. 22, 2002:

Quench Event: Yellow, 4b-time.A @ 05:43:48 (+1041375) Ring Permit Fail Time: 05:43:48 (+1041407)
Timing Resolver Status: yi3-qf9-qp first to trip. (Occurred at turn On)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 09:26:02: comment by ganetis... This was cause by yi3-qf9 during turn on. It had an error fault. This is most likely a hardware problem that will be taken care of on next maintance day. Postmortems indicated that the supplies were running at low currents. Yi3-qf9-ps shows a current spike from 0amps to 7.67amps at –0.0014 before T=zero.

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Sun, Dec. 22, 2002:

Quench Event: Yellow, 4b-time.A @ 09:51:36 (+3120098) Ring Permit Fail Time: 09:51:36 (+3120128)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 20:12:59: comment by ganetis... yellow main p.s. had an A.C. under-voltage fault. There is a hint of an A.C. line disturbance just before the fault. Postmortems show an AC Power disturbance on the line monitors.

Sun, Dec. 22, 2002:

Quench Event: Blue, 6b-ps1 @ 09:54:16 (+1940153) Ring Permit Fail Time: 09:54:16 (+1928018)
QPACtrl: Nothing to report.
QDAlarms: B6DRDX_VT Int.1, Tq= -23.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 10:04:45: comment by Mei... So, yellow went first, then blue followed. We are still investigating the cause. 20:21:38: comment by ganetis... Don Burno was directing CAS in trouble shooting a problem with the DMM readout for b6-dhx-ps. CAS used a radio to communacate to each other. when they keyed the mic this induced a signal into the current signal of the DX current regulator. This sudden jump in current caused the quench detector to trip. Postmortems show that b6-dhx Iref dropped from 162.5amps to 159amps –0.0380sec before T=zero.

Sun, Dec. 22, 2002:

Quench Event: Blue, 10a-ps3.B @ 16:18:36 (+751848) Ring Permit Fail Time: 16:18:36 (+751877)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: All 6b-ps2 and 10a-ps3.A1 & 10a-ps3.B1 Fired.
Real Quench Status: REAL, B6DRDX_VT, B5DRDX_VT and B10DRDX_VT.

Sun, Dec. 22, 2002:

Quench Event: Yellow 6b-ps1 @ 16:18:36 (+1331048) Ring Permit Fail Time: 16:18:36 (+751877)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: All 6b-ps2 and 10a-ps3.A1 & 10a-ps3.B1 Fired.
Real Quench Status: REAL, B6DRDX_VT, B5DRDX_VT and B10DRDX_VT.

Technical Notes from the Running Logs: 17:26:36: comment by ganetis... The 6 KA quench protection switch b10-dqpsw detected a blue link trip and shut off. This was before the blue link did trip. 17:38:46: comment by ganetis... The yellow link tripped due to a quench detector in 6b and 10a that saw a large voltage increase on the yellow D0 magnet. This voltage is due to magnetic coupling between the blue and yellow D0 magnets. When DX magnets quench (The quench heaters in B5DX, B6DX and B10DX fired.) the circuit causes a very large change in the current in the blue D0 magnets which in turn induces voltage in yellow D0

Sun, Dec. 22, 2002:

Quench Event: Yellow 12a-ps1.A @ 18:33:28 (+2455789)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: All 6b-ps2 and 10a-ps3.A1 & 10a-ps3.B1 Fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 20:04:18: comment by ganetis... The 12a yellow quench detector triped the link because y12-q89-ps was programmed to ramp another 20 amps in .35 sec. at the end of the ramp. It seems all yellow q89s seems to do this. Previous ramps do not show this. Also, y12-q7, Iref shows a ramp down of 16amps in 0.35 seconds.

Sun, Dec. 22, 2002:

Quench Event: Yellow 12a-ps1.A @ 19:12:08 (+1718820) Ring Permit Fail Time: 19:12:08 (+1718849)
QPACtrl: Nothing to report.
QDAlarms: Y11QDQ8_VT Int5, TQ= -23.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 20:08:42: comment by ganetis... Same ramp with q89 programmed to ramp another 20 amps. in .35 sec. at the end of the ramp. This continues to trip the quench detectors. 20:31:05: comment by Johannes... Yes, I see the wfg signal going into a sawtooth right at 230 seconds into the ramp. This signal is not from the RampEditor strengths, that is nice and flat in that area. I inited the wfg's etc. and perhaps Al can figure out why this is happening. 20:38:42: comment by ganetis... Johannes - The saw tooth you see on the snap ramp data is the file being over writen by the postmortem data. You have to look at the postmortem data to see what is happening. y12-q7, Iref shows a ramp down of 16amps in 0.35 seconds.

MERRY CHRISTMAS!!!

Wed, Dec. 25, 2002:

Quench Event: Yellow 10a-ps3.A @ 13:12:20 (+1360843)
QPACtrl: Nothing to report.
QDAlarms: Y10DRDR_GL, Int 1, Tq= -21
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 14:50:08: comment by ganetis... This yellow quench link trip was caused by the quench detector at 10a-qd2. The quench detector trip was caused by a over-voltage condition on Y10DRDR_GL. This is the voltage across the gas cooled lead Y10DR sleave 4A. Cryo needs to check that the flow controller is working for this lead. 13:12 Development off. Yellow Ring Quench Link interlock several minutes after completing a 6x5 bunch ramp. The Yellow Quad MMPS tripped off. The other magnets are being ramped down.

Wed, Dec. 25, 2002:
Quench Event: Yellow 10a-ps3.A @ 14:32:42 (+91518)
QPACtrl: Nothing to report.
QDAlarms: Y10DRDR_GL, Int 1, Tq= -21
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 14:52:28: comment by ganetis... Same problem with Y10DR gas cooled lead. Cryo needs to check the flow for this lead!

Wed, Dec. 25, 2002:
Quench Event: Yellow 8b-ps1 @ 15:20:04 (+1600988)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: 16:21:14: comment by ganetis... This was caused by an error fault on y8-q89-ps. The p.s. was in the on state but it did not follow Iref. There was no output voltage either. This p.s. should be watched.

Wed, Dec. 25, 2002:
Quench Event: Blue, 10a-ps3.A @ 19:18:12 (+1776589)
QPACtrl: QP10-R10AD8-bo10-dh0-qp Crow & Fuse Fault.
All dhx qp's show crowbar, QP10-R8BD3-b8-dh0-qp OVC fault.
QDAlarms: B10QFQ4_6VT, Int. 1, Tq= -25.
DxHeaters: All 2b-ps2, 6b-ps2, 12a-ps2 and 10a-ps3.A1 & B1 Fired.
Real Quench Status: REAL (2b-qd1)=B2DRDX, B1DRDX
(6b-qd1)= B6DRDX, B5DRDX
(10a-qd1)= B10QFQ4_6VT, B10DRDX
(12a-qd1)= B12DRDX, B11DRDX

Wed, Dec. 25, 2002:
Quench Event: Yellow, 10a-ps3.A @ 19:18:12 (+2325989)
QDAlarms: Y10DRD0_D0, Int. 5, Tq= -23.
Real Quench Status: SEE ABOVE DATA.

Technical Notes from the Running Logs: 20:31:45 A large part of loss monitors data in PostMortem during last Blue dump was corrupted, so we could not identify exactly if the reason for the quench is dirty dump or something else. 19:18:17 Beam Abort, 10a-ps3.A dropped {Loss Monitor 2} 20:19:49: comment by ganetis... Blue quench link tripped because b10Q4 or Q5 or Q6 Quenched. The signal that should of alarmed is B10QFQ4_6VT. Because this happened at top energy the problem with the DO DCCTs caused 7 DX magnets to also quench. The yellow quench link tripped because of the D0 magnetic coupling between blue and yellow D0s. 22:33:04: comment by Angelika... DCCT-WCM data for your blue ramp does not indicate a 'dirty dump'. This is a problem we had with too much debunched beam (Au beam) last run. Or are you refering to a misfire of one or more dump kickers? Aren't they logged? Qdplots indicated that the BDMC= 3966.21, BQMC= 3700.92

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Wed, Dec. 25, 2002:

Quench Event: Blue, 2b-ps1 @ 23:56:32 (+3155122)
QPACtrl: QP11-R2BD2-b2-dhx-qp shows Crowbar Fault.
QDAlarms: Nothing to report.
DxHeaters: None Fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Postmortems show the Iref spiked from 0 to 29.5amps at –0.0265sec before T=zero. Current spike to 81.30amps at –0.0167sec before T=zero, Voltage spiked to the rail of 10volts at –0.02sec before T=zero. There is a current disturbance that goes from 0amps to –2amps then up to +1amp before settling back down to zero all starting at –1.0sec before T=zero. This is probably due to oscillation at the low current.

Thurs, Dec. 26, 2002:

Quench Event: Blue, 10a-ps3.B @ 07:36:52 (+3222207)
QPACtrl: b2, b4, b6, b8, b12, bi9-dhx-qp & b10-dh0-qp show crowbar.
QP10-R8BD3-b8-dh0-qp indicates a OVC fault.
QDAlarms: Nothing to report.
DxHeaters: All 4b, 8b and 10a-ps3.A1 & B1 Fired.
Real Quench Status: (8b-qd1)= B8DRDX, B7DRDX.

Thurs, Dec. 26, 2002:

Quench Event: Yellow, 10a-ps3.A @ 07:36:52 (+3805342) Ring Permit Fail Time:
Timing Resolver Status: QPACtrl: Nothing to report.
QDAlarms: Y4DRD0_D0, Int.5, Tq= -11
Y10DRD0_DO, Int. 5, Tq= -23.

Technical Notes from the Running Logs: Both Quench Links have dropped during IR steering for PHOBOS. It appears that it caused a real quench (visible on the dh0 supplies on either side of the IR). 07:08:13: comment by jak... Rates with beams cogged and no steering as of yet. PHENIX has requested the use of the beam for an hour or so for timing purposes. 07:58:36 Unsuccessful scan of the STAR IR collision rates on my part eventually reaching +3mm by small increments raised PHOBOS rates, and probably pulled the quench link. BLB

Thurs, Dec. 26, 2002:

Quench Event: Yellow, 10a-ps3.A @ 08:56:56 (+45942)
Quench Event: Blue, 10a-ps3.A @ 10:50:12 (+1500634)
DxHeaters: All dx heaters were fired throughout the ring.

Technical Notes from the Running Logs: Maintenance Day.

Thurs, Dec. 26, 2002:

Quench Event: Blue, 4b-time.B @ 16:58:12 (+1228910)
QPACtrl: b6-dhx-qp indicates Crowbar Fault.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: Recovering from the maintenance day, the n720Hz chassis would fall out of synchronization, Carl repaired it and the Recovery was re-commissioned.

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Fri, Dec. 27, 2002:
Quench Event: Blue, 11b-ps1 @ 00:45:56 (+3309323) Ring Permit Fail Time: 00:45:56 (+3309323)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired
Real Quench Status: Nothing to report.

Fri, Dec. 27, 2002:
Quench Event: Yellow, 11b-ps1 @ 00:45:56 (+3310348) Ring Permit Fail Time: 00:45:56 (+3310348)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: At start of shift, we were down due to a yi11-sxd QPA fault, and Wing Louie investigated until recovery at 0155. TJS 00:45:18 Wing ramped the QPA manually to 24A (above normal) and the tripping threshold is still way below. Don Bruno asked us to do a ramp but this time yi-11-sxd QPA did not trip. In the mean time cfe-11b-qd1 and QD bucket has to be reset, which will pull down both Blue and Yellow quench links. After Wing resets the bucket, we will bring the links up and do another ramp under Wing and Don's supervision. SA Before this Quench Event, MCR had logged in that the yi11-sxd-ps has an error (Quench, Stby-Error, Crow).

Fri, Dec. 27, 2002:
Quench Event: Blue, 11b-ps1 @ 10:44:52 (+83729)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired
Real Quench Status: Nothing to report.

Fri, Dec. 27, 2002:
Quench Event: Yellow, 11b-ps1 @ 10:44:52 (+83729)
QPACtrl: Nothing to report.
QDAlarms: Nothing to report.
DxHeaters: None fired.
Real Quench Status: Nothing to report.

Technical Notes from the Running Logs: (Chain of events that contributed to the above two quench events) 10:39:10 Ramping down to park to allow Don Bruno to do software changes for the sextupole. 10:44:55 Beam Abort, 11b-ps1 dropped Blue Quench. 10:44:55 Quench Link Interlock in Blue ring, 11b-ps1 dropped first. 10:44:56 Quench Link Interlock in Yellow ring, 11b-ps1 dropped first. 10:55 cfe-11b-qd1 has been reset. Don is continuing with making his changes. 11:10 Machine Setup. The MCR is recovering both Quench links, which automatically trip when a QD FEC is rebooted. 11b-qd1 was not responding and had to be re-booted, causing the blue and yellow quench event.

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Fri, Dec. 27, 2002:

Quench Event: Blue, 10a-ps3.B @ 15:45:00 (+1302162)
QPACtrl: b2, b4, b6, b8, bi9 and b12-dhx-qp Crowbar.
QDAlarms: Nothing to report.
DxHeaters: All 6b and 8b dhx fired.
Real Quench Status: REAL: (6b-qd1)= B6DRDX_VT, B5DRDX_VT
(8b-qd2)= B8DRDX_VT, B7DRDX_VT

Fri, Dec. 27, 2002:

Quench Event: Yellow, 6b-ps1 @ 15:45:00 (+1878287)
QDAlarms: Y6DRD0_D0, Int. 5, Tq= -23.
DxHeaters: All 6b and 8b dhx fired.
Real Quench Status: REAL: (6b-qd1)= B6DRDX_VT, B5DRDX_VT
(8b-qd2)= B8DRDX_VT, B7DRDX_VT

Technical Notes from the Running Logs: This afternoon's Blue and Yellow QLI was due to loose connections on the Modicon PLC at 1010a. After witnessing a flickering of the power indicators, an attempt to tighten its connections was made and also the local/remote switch on the quench link chassis was found to have dirty contacts.

Fri, Dec. 27, 2002:

Quench Event: Blue, 8b-ps1 @ 16:29:56 (+2240595)
QPACtrl: b8-q6-qp (Fan Fault)
Timing Resolver Status: Indicated b8-q6-qp was the fifth (5) in line to fail, no others showed fault.
DxHeaters: None fired.
Real Quench Status: Not real

Technical Notes from the Running Logs: This occurred while trying to recover from the last quench event.

Fri, Dec. 27, 2002:

Quench Event: Yellow, 4b-time.A @ 17:29:00 (+1217338)
QPACtrl: bi9-tq5-qp (Fuse Fault)
DxHeaters: None fired.
Real Quench Status: Not real

Technical Notes from the Running Logs: This occurred while trying to recover from the last quench event.

Fri, Dec. 27, 2002:

Quench Event: Blue, 10a-ps3.A @ 17:58:56 (+3478296)
QPACtrl: b8-q6-qp (OVC Fault)
QDAlarms: B10DRDX_VT Int. 1, Tq= -23
DxHeaters: None fired.
Real Quench Status: Not real

Technical Notes from the Running Logs: This occurred while trying to recover from the last quench event.